

AMENDMENTS TO THE CLAIMS

1.-48. (Cancelled)

49. (New) A stackable substrate carrying tray for placing a substrate horizontally thereon, being stackable by making an upper contact section of the substrate carrying tray contact a lower surface of an upper tray and by making a lower contact section of the substrate carrying tray contact an upper surface of a lower tray, comprising:

a loading bed for loading the substrate; and

a frame provided to surround an outer edge of the loading bed,

wherein the frame includes a frame body, an upper side fixing section and a lower side fixing section, the upper side fixing section and the lower side fixing section inwardly protruding from an inner edge surface of the frame body so as to sandwich an outer edge of the loading bed,

wherein the frame includes the upper contact section having an upper inclined section and the lower contact section having a lower inclined section,

wherein:

the loading bed includes a frame section whose inner perimeter is larger than an outer perimeter of the substrate, and

there is a gap between the upper side fixing section and the frame section.

50. (New) The stackable substrate carrying tray according to claim 49, wherein the loading bed is made of a material that can absorb impact more than the frame.

51. (New) The stackable substrate carrying tray according to claim 50, wherein the loading bed is made of foam polyethylene.

52. (New) The stackable substrate carrying tray according to claim 49, wherein the frame includes a protrusion that engages a chuck for catching the stackable substrate carrying tray, the protrusion outwardly protruding from an outer edge surface of an peripheral edge of the frame.

53. (New) The stackable substrate carrying tray according to claim 49, wherein each of the upper contact section and the lower contact section includes a first region having an inner edge, a second region having an outer edge and an intermediate region between the first and second regions, the first and second regions being horizontal and only the intermediate region being inclined.

54. (New) The stackable substrate carrying tray according to claim 49, wherein an inner edge is lower than an outer edge of the upper inclined section, and an outer edge is lower than an inner edge of the lower inclined section.

55. (New) The stackable substrate carrying tray according to claim 49, wherein an outer edge is lower than an inner edge of the upper inclined section, and an inner edge is lower than an outer edge of the lower inclined section.

56. (New) The stackable substrate carrying tray according to claim 49, wherein the upper contact section is formed in a shape enabling to move back the upper tray to a standard situation by making the lower surface of the upper tray move back on the upper contact section of the stackable substrate carrying tray by use of gravity and inclination of the upper contact section, when the upper tray has moved on the stackable substrate carrying tray so as to go out of the standard situation due to moving of the lower surface of the upper tray on the upper contact section of the stackable substrate carrying tray, the standard situation being a situation wherein a center of gravity of the upper tray is positioned right above a center of gravity of the stackable substrate carrying tray.

57. (New) The stackable substrate carrying tray according to claim 56, wherein the lower inclined section has a same inclined direction as that of the upper inclined section.

58. (New) The stackable substrate carrying tray according to claim 57, wherein the upper and lower contact sections are disposed on a peripheral edge of the substrate carrying tray.

59. (New) The stackable substrate carrying tray according to claim 58, wherein the upper and lower contact sections are different from a protrusion that engages a chuck for catching the stackable substrate carrying tray.

60. (New) The stackable substrate carrying tray according to claim 58, wherein the stackable substrate carrying tray includes a protrusion that engages a chuck for catching the stackable substrate carrying tray, the protrusion outwardly protruding from an outer edge surface of the peripheral edge of the stackable substrate carrying tray,

the outer edge surface is formed, in a plane manner, in such a direction that becomes a vertical direction when the stackable substrate carrying tray is placed horizontally, and

the upper and lower contact sections are provided inwardly from the outer edge surface.

61. (New) The stackable substrate carrying tray according to claim 57, wherein:

the upper inclined section is provided entirely on an upper surface of the upper contact section, and

the lower inclined section is provided entirely on a lower surface of the lower contact section.

62. (New) The stackable substrate carrying tray according to claim 57, wherein:

the upper inclined section is provided on a portion including an outer edge or inner edge of an upper surface of the upper contact section, and

the lower inclined section is provided on a portion of the lower contact section, the portion including an edge corresponding to an edge on which the upper inclined section is disposed.

63. (New) The stackable substrate carrying tray according to claim 57, wherein at least one of the upper and lower inclined sections are inclined in a plane manner.

64. (New) The stackable substrate carrying tray according to claim 57, wherein at least one of the upper and lower inclined sections are inclined in such a curved manner that the lower a position is, the more gradual a gradient is.

65. (New) The stackable substrate carrying tray according to claim 57, wherein the upper and lower inclined sections have an identical shape at respective contact portions.

66. (New) The stackable substrate carrying tray according to claim 57, wherein

the upper contact section contacting the first substrate carrying tray which is stacked above said substrate carrying tray by only the surface of the upper contact section and the lower contact section contacting the second substrate carrying tray which is stacked below said substrate carrying tray by only the surface of the lower contact section, and

wherein the surface of the upper contact section and the surface of the lower contact section have the same surface area, the same shape, and the same inclination.

67. (New) The stackable substrate carrying tray according to claim 56, wherein the substrate carrying tray has such a shape that the first substrate carrying tray is not in contact with the substrate when the substrate is placed on said carrying tray.

68. (New) The stackable substrate carrying tray according to claim 56, wherein the substrate carrying tray has such a shape that there is a space between a lower end of the first substrate carrying tray and an upper end of the substrate when the substrate is placed on said substrate carrying tray.

69. (New) The stackable substrate carrying tray according to claim 56, wherein the upper and lower contact sections each has such a shape that a space inside the frame is an enclosed space when the substrate carrying tray, the upper tray and the lower tray are stacked on each other.

70. (New) The stackable substrate carrying tray according to claim 56, wherein the loading bed includes a frame section whose inner perimeter is larger than an outer perimeter of the substrate.

71. (New) The stackable substrate carrying tray according to claim 70, wherein the frame section of the loading bed has such a shape that the first substrate carrying tray is not in contact with the substrate when the substrate is placed on said substrate carrying tray.

72. (New) The stackable substrate carrying tray according to claim 70, wherein the frame section of the loading bed has such a shape that there is a space between a lower end of the first substrate carrying tray and an upper end of the frame section.

73. (New) The stackable substrate carrying tray according to claim 70, wherein an upper end of the frame section of the loading bed is lower than an upper end of the upper contact section and higher than an upper end of the substrate placed on the substrate carrying tray.

74. (New) The stackable substrate carrying tray according to claim 56, wherein the upper and lower contact sections each has such a shape that the upper and lower contact sections, connected to each other, constitute a post which extends vertically when the substrate carrying tray, the upper tray and the lower tray are stacked on each other.

75. (New) The stackable substrate carrying tray according to claim 56, wherein two or more substrates can be vertically placed and carried by a structure that three or more stackable substrate carrying trays are stacked.

76. (New) The stackable substrate carrying tray according to claim 56, wherein the upper contact section contacting the first substrate carrying tray which is stacked above said substrate carrying tray by only an angled portion of the upper contact section and the lower contact section contacting the second substrate carrying tray which is stacked below said substrate carrying tray by only an angled portion of the lower contact section, and

wherein the angled portion of the upper contact section and the angled portion of the lower contact section have equal width and the same inclination.

77. (New) The stackable substrate carrying tray according to claim 56, wherein, at one end of the stackable substrate carrying tray, an entire slope of a surface for contact with the upper tray has only one of an upslope and a downslope toward interior of the stackable substrate carrying tray.

78. (New) The stackable substrate carrying tray according to claim 77, wherein, at any end of the stackable substrate carrying tray, the slope of the surface for contact with the upper tray shows a same variation of either an upslope or a downslope towards interior of the stackable substrate carrying tray.

79. (New) A stackable substrate carrying tray for placing a substrate horizontally thereon, being stackable by making an upper contact section of the substrate carrying tray contact a lower surface of an upper tray and by making a lower contact section of the substrate carrying tray contact an upper surface of a lower tray, comprising:

a loading bed for loading the substrate; and

a frame provided to surround an outer edge of the loading bed, wherein the frame includes the upper contact section having an upper inclined section and the lower contact section having a lower inclined section,

wherein the loading bed includes a frame section whose inner perimeter is larger than an outer perimeter of the substrate, an upper surface of the frame section being lower than the upper contact section.

80. (New) The stackable substrate carrying tray according to claim 79, wherein the frame includes a protrusion that engages a chuck for catching the stackable substrate carrying tray, the protrusion outwardly protruding from an outer edge surface of an peripheral edge of the frame.

81. (New) The stackable substrate carrying tray according to claim 79, wherein each of the upper contact section and the lower contact section includes a first region having an inner edge, a second region having an outer edge and an intermediate region between the first and second regions, the first and second regions being horizontal and only the intermediate region being inclined.

82. (New) The stackable substrate carrying tray according to claim 79, wherein an inner edge is lower than an outer edge of the upper inclined section, and an outer edge is lower than an inner edge of the lower inclined section.

83. (New) The stackable substrate carrying tray according to claim 79, wherein an outer edge is lower than an inner edge of the upper inclined section, and an inner edge is lower than an outer edge of the lower inclined section.

84. (New) The stackable substrate carrying tray according to claim 79, wherein the upper contact section is formed in a shape enabling to move back the upper tray to a standard situation by making the lower surface of the upper tray move back on the upper contact section of the stackable substrate carrying tray by use of gravity and inclination of the upper contact section, when the upper tray has moved on the stackable substrate carrying tray so as to go out of the standard situation due to moving of the lower surface of the upper tray on the upper contact section of the stackable substrate carrying tray, the standard situation being a situation wherein a center of gravity of the upper tray is positioned right above a center of gravity of the stackable substrate carrying tray.

85. (New) The stackable substrate carrying tray according to claim 84, wherein the lower inclined section has a same inclined direction as that of the upper inclined section.

86. (New) The stackable substrate carrying tray according to claim 85, wherein the upper and lower contact sections are disposed on a peripheral edge of the substrate carrying tray.

87. (New) The stackable substrate carrying tray according to claim 86, wherein the upper and lower contact sections are different from a protrusion that engages a chuck for catching the stackable substrate carrying tray.

88. (New) The stackable substrate carrying tray according to claim 86, wherein the stackable substrate carrying tray includes a protrusion that engages a chuck for catching the stackable substrate carrying tray, the protrusion outwardly protruding from an outer edge surface of the peripheral edge of the stackable substrate carrying tray,

the outer edge surface is formed, in a plane manner, in such a direction that becomes a vertical direction when the stackable substrate carrying tray is placed horizontally, and

the upper and lower contact sections are provided inwardly from the outer edge surface.

89. (New) The stackable substrate carrying tray according to claim 85, wherein:

the upper inclined section is provided entirely on an upper surface of the upper contact section, and

the lower inclined section is provided entirely on a lower surface of the lower contact section.

90. (New) The stackable substrate carrying tray according to claim 85, wherein:

the upper inclined section is provided on a portion including an outer edge or inner edge of an upper surface of the upper contact section, and

the lower inclined section is provided on a portion of the lower contact section, the portion including an edge corresponding to an edge on which the upper inclined section is disposed.

91. (New) The stackable substrate carrying tray according to claim 85, wherein at least one of the upper and lower inclined sections are inclined in a plane manner.

92. (New) The stackable substrate carrying tray according to claim 85, wherein at least one of the upper and lower inclined sections are inclined in such a curved manner that the lower a position is, the more gradual a gradient is.

93. (New) The stackable substrate carrying tray according to claim 85, wherein the upper and lower inclined sections have an identical shape at respective contact portions.

94. (New) The stackable substrate carrying tray according to claim 85, wherein

the upper contact section contacting the first substrate carrying tray which is stacked above said substrate carrying tray by only the surface of the upper contact section and the lower contact section contacting the second substrate carrying tray which is stacked below said substrate carrying tray by only the surface of the lower contact section, and

wherein the surface of the upper contact section and the surface of the lower contact section have the same surface area, the same shape, and the same inclination.

95. (New) The stackable substrate carrying tray according to claim 84, wherein the substrate carrying tray has such a shape that the first substrate carrying tray is not in contact with the substrate when the substrate is placed on said carrying tray.

96. (New) The stackable substrate carrying tray according to claim 84, wherein the substrate carrying tray has such a shape that there is a space between a lower end of the first substrate carrying tray and an upper end of the substrate when the substrate is placed on said substrate carrying tray.

97. (New) The stackable substrate carrying tray according to claim 84, wherein the upper and lower contact sections each has such a shape that a space inside the frame is an enclosed space when the substrate carrying tray, the upper tray and the lower tray are stacked on each other.

98. (New) The stackable substrate carrying tray according to claim 84, wherein the loading bed includes a frame section whose inner perimeter is larger than an outer perimeter of the substrate.

99. (New) The stackable substrate carrying tray according to claim 98, wherein the frame section of the loading bed has such a shape that the first substrate carrying tray is not in contact with the substrate when the substrate is placed on said substrate carrying tray.

100. (New) The stackable substrate carrying tray according to claim 98, wherein the frame section of the loading bed has such a shape that there is a space between a lower end of the first substrate carrying tray and an upper end of the frame section.

101. (New) The stackable substrate carrying tray according to claim 98, wherein an upper end of the frame section of the loading bed is lower than an upper end of the upper contact section and higher than an upper end of the substrate placed on the substrate carrying tray.

102. (New) The stackable substrate carrying tray according to claim 84, wherein the upper and lower contact sections each has such a shape that the upper and lower contact sections, connected to each other, constitute a post which extends vertically when the substrate carrying tray, the upper tray and the lower tray are stacked on each other.

103. (New) The stackable substrate carrying tray according to claim 84, wherein two or more substrates can be vertically placed and carried by a structure that three or more stackable substrate carrying trays are stacked.

104. (New) The stackable substrate carrying tray according to claim 84, wherein the upper contact section contacting the first substrate carrying tray which is stacked above said substrate carrying tray by only an angled portion of the upper contact section and the lower contact section contacting the second substrate carrying tray which is stacked below said substrate carrying tray by only an angled portion of the lower contact section, and

wherein the angled portion of the upper contact section and the angled portion of the lower contact section have equal width and the same inclination.

105. (New) The stackable substrate carrying tray according to claim 84, wherein, at one end of the stackable substrate carrying tray, an entire slope of a surface for contact with the upper tray has only one of an upslope and a downslope toward interior of the stackable substrate carrying tray.

106. (New) The stackable substrate carrying tray according to claim 105, wherein, at any end of the stackable substrate carrying tray, the slope of the surface for contact with the upper tray shows a same variation of either an upslope or a downslope towards interior of the stackable substrate carrying tray.